

# Work Order ID 76913

November 23, 2011 2:22:57 PM

**\*76913\***

Page 1

Item ID: D2600-1-160 Accept **\*N9000040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Extrusion Round 3" 206  
 Start Date: 11/23/11 Start Qty: 90.00 **\*90\*** Cust Item ID:  
 Required Date: 12/16/11 Req'd Qty: 90.00 **\*90\*** Customer:  
 Reference:

Approvals: Process Plan: CL Date: 11/11/23 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D2600	Rev D1

100	PURCHASING	0.00							
<b>*100*</b>									
Purchasing	Memo	0.00							
Purchasing	Issue P/O: <u>15522</u> a) Extrude as per Dwg D2600b) Material: 6061-T6 (QQ-A-200/8)c) Minimum yield tensile strength = 35 ksid) Minimum ultimate tensile strength = 40 ksi e) Minimum elongation = 8%f) Order at 160" longg) Bon L Canada Inc. tool #								

110	Receive & Inspect for Damage & Mat'l Certs	0.00							
<b>*110*</b>									
Packaging	Memo	0.00							
Packaging	Ensure material certification is attached								

120	QC6- Inspect dimensions to drawing	0.00							
<b>*120*</b>									
QC	Memo	0.00							
Quality Control	Check Pull test per Dwg D2600 for compliance page attached Check hardness with Webster tester								

\* want 2ops Bright to ac for spot inspection \*

Sum 11/23 920

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 76913

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Page 2

November 23, 2011 2:22:57 PM

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Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: <i>back hall</i>	0.00							
<b>*130*</b>									
Packaging	Memo	0.00							
Packaging									
140	QC21- Final Inspection - Work Order Release	0.00							
<b>*140*</b>									
QC	Memo	0.00							
Quality Control									

*25 12-01-03*

*OK 12/01/03*

*MF 12-01-03*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

November 23, 2011 2:22:56 PM

Page 1

Work Order ID: 76913

Parent Item: D2600-1-160

Parent Item Name: Extrusion Round 3" 206

Start Date: 11/23/11

Required Date: 12/16/11

Start Qty: 90.00

Required Qty: 90.00

Comments: IPP D: 02.09.05 Added DSK 066 KJ/RF

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-1-160P Extrusion Round 3" 206		Purchased	No			110	Each	0.0000	1	90			

*11/24/20* (92)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



DESIGN <i>DRG</i>	DRAWN BY <i>DRG</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>KE</i>	APPROVED <i>AS</i>	DRAWING NO. D2600	REV. 0 SHEET 1 OF 5
DATE 98.08.20		TITLE EXTRUSION	SCALE 1:1
A	97.01.21	NEW ISSUE	
B	97.09.09	CHANGE MATERIAL SPEC.	
C	98.04.16	ADD D2600-3, UPDATE D2600-1 WIDTH, ADD DIE NO.	
D	98.08.20	INCREASE MIN. UTS TO 40 KSI	
D1	01.04.17	ADD PART NUMBERS & DIE NUMBERS <i>#GP</i>	

RELEASED  
98.08.25 DS

### GENERAL NOTES

1. MATERIAL: 6061-T6 (QQ-A-200/8)

MINIMUM YIELD TENSILE STRENGTH = 35 ksi  
MINIMUM ULTIMATE TENSILE STRENGTH = 40 ksi  
MINIMUM ELONGATION = 8 %

A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY TO ENSURE THAT THE BATCH MEETS THE ABOVE MINIMUM MECHANICAL PROPERTIES.

2. BREAK ALL SHARP CORNERS 0.010 MAX.
3. NO TOOLING MARKS.
4. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
5. ALL DIMENSIONS ARE IN INCHES.

*C&1111/23*

*W10: 769/3*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

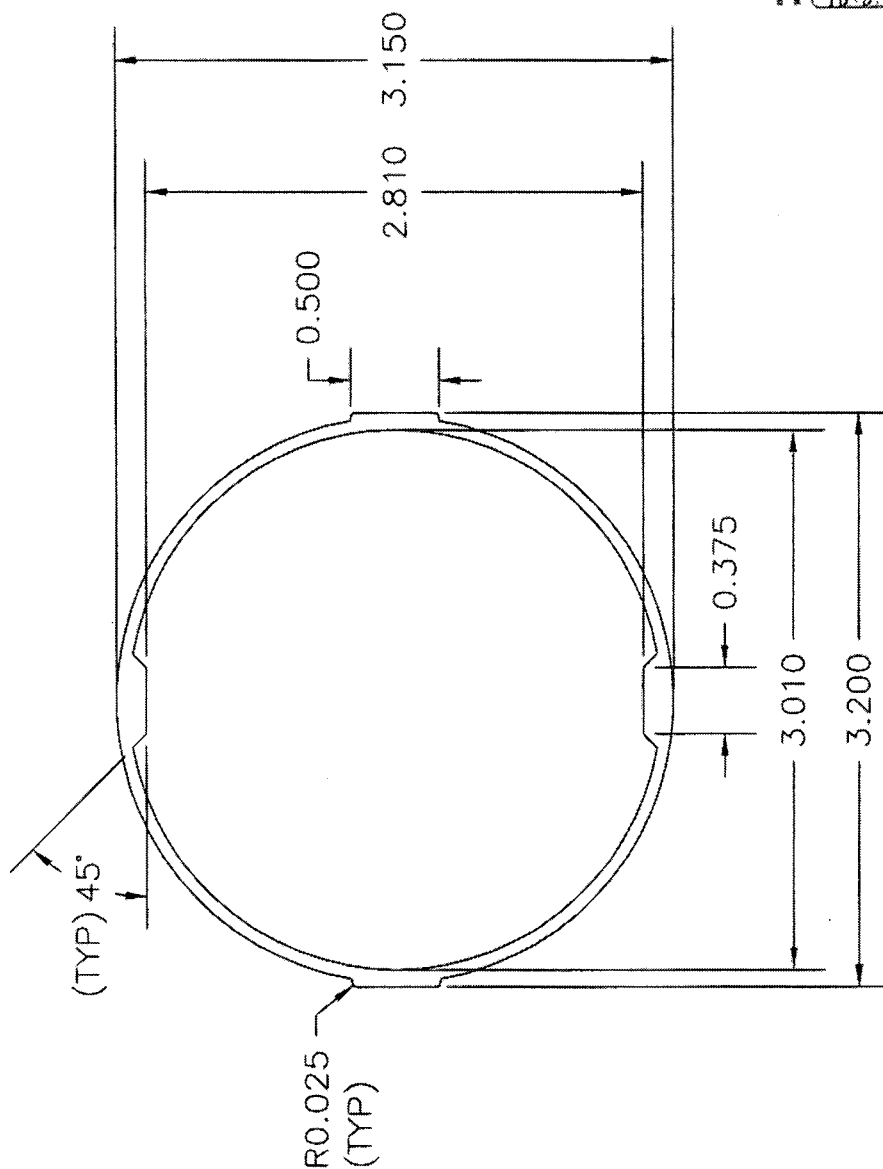
**NOTE:** Date & initial all entries





DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>KE</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2600	REV. D SHEET 2 OF 5
DATE 98.08.20		TITLE EXTRUSION	SCALE 1:1

RELEASED  
98.8.25 DS



D2600-1

MANUFACTURED WITH CARADON INDALEX DIE # MH-18870

OR BON L DIE # 897121 (PREFERRED CHOICE)

PART NUMBER IS D2600-1-XXX WHERE XXX IS CUT LENGTH IN INCHES (EG. D2600-1-160 IS 16.0" LONG)



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

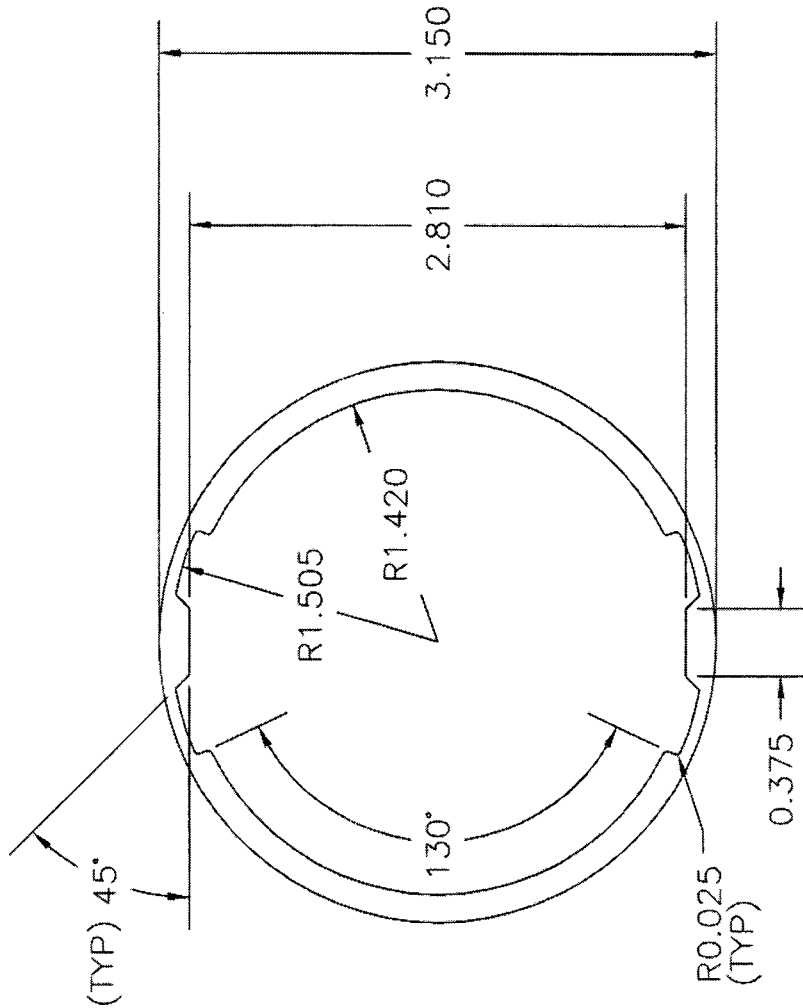
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



DESIGN <i>DM</i>	DRAWN BY <i>DM</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>KE</i>	APPROVED <i>SA</i>	DRAWING NO. D2600	REV. D SHEET 3 OF 5
DATE 98.08.20		TITLE EXTRUSION	SCALE 1:1

RELEASED  
98.8.25 DS



D2600-3

MANUFACTURED WITH CARADON INDALEX DIE # MH-18859

OR BON L DIE # 897122 (PREFERRED CHOICE)

PART NUMBER IS D2600-3-XXX WHERE XXX IS CUT LENGTH IN INCHES (EG. D2600-3-120 IS 120" LONG)



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

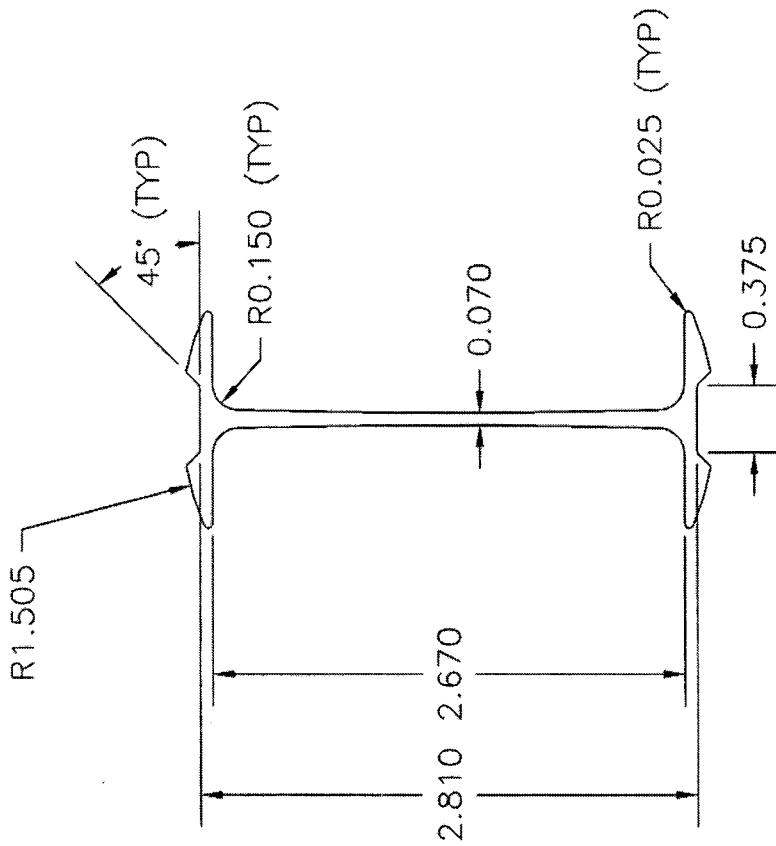
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



DESIGN <i>MB</i>	DRAWN BY <i>MB</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>KE</i>	APPROVED <i>KE</i>	DRAWING NO. D2600	REV. D SHEET 4 OF 5
DATE 98.08.20	TITLE EXTRUSION		SCALE 1:1

RELEASED  
98.8.25 DS



D2600-5

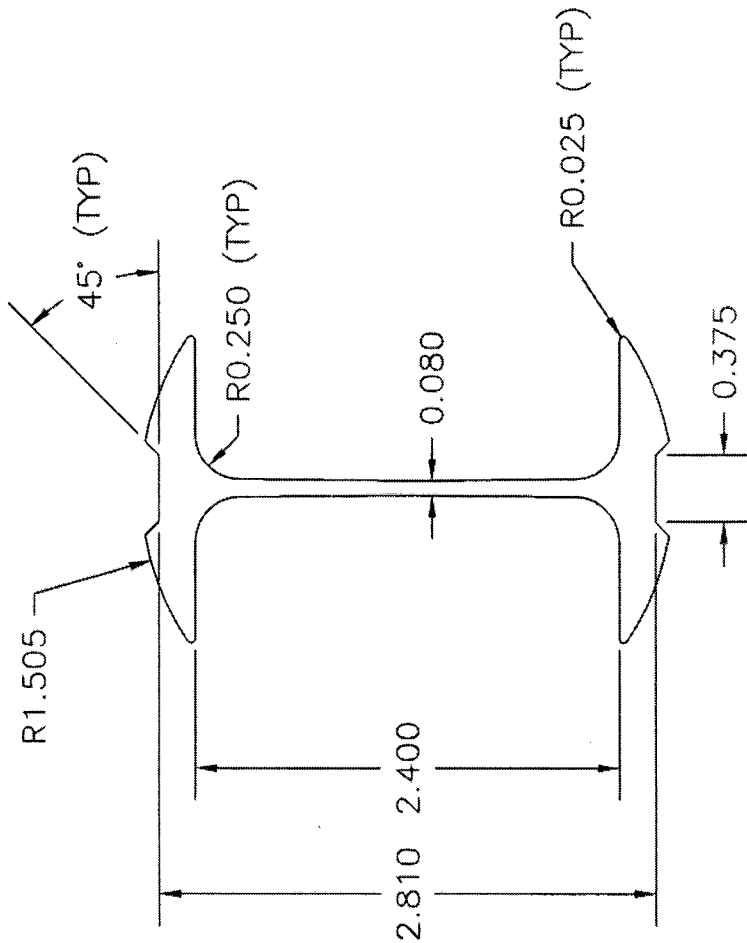
MANUFACTURED WITH CARADON INDALEX DIE # MS-18871  
PART NUMBER IS D2600-5-XXX WHERE XXX IS CUT LENGTH IN INCHES  
(EG. D2600-5-108 IS 108" LONG)





DESIGN <i>MA</i>	DRAWN BY <i>MA</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>KE</i>	APPROVED <i>JS</i>	DRAWING NO. D2600	REV. 0 SHEET 5 OF 5
DATE 98.08.20		TITLE EXTRUSION	SCALE 1:1

RELEASED  
98.8.25 DS



D2600-7

MANUFACTURED WITH CARADON INDALEX DIE # MS-18872  
PART NUMBER IS D2600-7-XXX WHERE XXX IS CUT LENGTH IN INCHES  
(EG. D2600-7-125 IS 125" LONG)





Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO15522

Purchase Order Date 11/23/11

PO Print Date 11/23/11

Page Number 2 of 2

Order From :

VC-BON001

SIGNATURE ALUMINUM  
1850 CLEMENTS ROAD  
PICKERING, ON L1W 3R8  
CA

Contact Name

Vendor Phone

Vendor Fax

Vendor Account Nbr

800 563 1079

800 565 8339

Buyer

Requisition Nbr

Tax Resale Nbr

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

CAD

Destination-Collect

Special Inst: EXTRUDE AS PER DWG D2600 REV. D  
B76912  
MATERIAL: 6061-T6 AS PER QQ-A-200/8  
MINIMUM YIELD TENSILE STRENGTH  
= 35 KSI  
MINIMUM ULTIMATE TENSILE  
STRENGTH = 40 KSI  
MINIMUM ELONGATION = 8%  
190" LONG  
DIE # 897121

3

D2600-1-160P

Extrusion Round 3" 206

12/16/11

Yes

90.00 Yours ppd

Each

\$38.8300

\$3,494.70

Special Inst: EXTRUDE AS PER DWG D2600 REV. D  
B76913  
MATERIAL: 6061-T6 AS PER QQ-A-200/8  
MINIMUM YIELD TENSILE STRENGTH  
= 35 KSI  
MINIMUM ULTIMATE TENSILE  
STRENGTH = 40 KSI  
MINIMUM ELONGATION = 8%  
160" LONG  
DIE # 897121

PO Total:

\$12,306.30

MATERIAL CERTIFICATION  
REQ'D UPON DELIVERY

Change Nbr:

1

Change Date: 11/23/11

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable



# CERTIFICATE OF COMPLIANCE

## SIGNATURE ALUMINUM CANADA

1850 CLEMENTS RD  
PICKERING, ON L1W 3R8

Cert Date	Cert No.	Sales Order	Page
12/09/2011	5274728	103704	1
Cust PO	B/L No	Lot	Date
15522	003796	808460	12/13/11

Sold To	Ship To
46024 DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 CANADA	46024 DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7 CANADA

Item No	Part No	Item Description	Cust Part
003	DAA-897121-1	160" Mill 6061 T6	D2600-1-160
Gross Weight	1,190 LBS		
Net Qty	1,155 LBS	92 PCS	2 PKGS
Specification		Die Desc	
AMS-QQ-A-200/8 & ASTM B221-08			

### Mechanical Tests:

Tensile	Yield	% Elongation	Conductivity	HREW
MPA / KSI	MPA / KSI			
313.8 / 45.5	283.5 / 41.1	9.3	0.0	92

### Chemical Analysis:

SI	FE	CU	MN	MG	CR	ZN	TI	V
0.66	0.27	0.24	0.09	0.94	0.06	0.10	0.02	0.01

8/11/21

This will certify that the material described herein has been inspected and tested in accordance with Signature Aluminum Canada's standard sampling and testing procedures or in accordance with the requirements of any specification forming a part of the material description to the extent indicated herein. Data of chemical composition for the material and test results from samples representative of the material are set forth above hereof or in any attachments hereto. This information shows that the material meets the applicable requirements. Inspection and test records are maintained on file. This certificate shall be deemed apart of and subject to the terms and conditions of warranty set forth on the reverse side of our order acknowledgement form. No other warranties are applicable.

S. Mazzotta, Director of Quality Signature Aluminum Canada Inc



ACCT# 46024

## INVOICING AND COMPANY LOCATION

SIGNATURE ALUMINUM CANADA  
1850 CLEMENTS ROAD  
PICKERING ON L1W 3R8

## SHIPPING MANIFEST

MANIFEST DATE / DATE DU BODEREAU  
12-11-11MANIFEST NUMBER / N° DE BODEREAU  
003796SALES ORDER NUMBER / N° DE COM  
103704

## SHIP TO / EXPÉDIÉ À

DART AEROSPACE LTD.  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
CANADA

PHONE: 613-632-5200

## SOLD TO / VENDUE À

DART AEROSPACE LTD.  
1270 ABERDEEN ST.  
HAWKESBURY, ON K6A 1K7  
CANADA

PHONE: 613-632-5200

TERMS / FREIGHT

PP

REFER TO  
THESE NUMBERS ON  
ALL CORRESPONDANCEREFEREZ-VOUS A CES  
NUMEROUS POUR TOUTE  
CORRESPONDANCE

LOCATION PIC		TRAILER NUMBER / REMORQUE Nombre 5301	SALESMAN / VENDEUR 042	CREDIT REP / REP DU CRÉDIT	SALES REP / REP. DES VENTES G.ATTENBOROU						
CUSTOMER ID / ID DU CLIENT 46024	ORDER DATE / DE LA COM 11/24/11	CUSTOMER PO NUMBER / CLIENT PO Nombre 15522		JOB / FICHIER	FIELD SALES REP / REP REGIONAL DES VENTES G.ATTENBOROU	CUST SERVICE REP / REP. SERVICE CLIENTELE DLB					
BILL OF LADING NUMBER / NO. DE CONNAISSEMENT 003796		CARRIER / TRANSPORTEUR JODEE									
ITEM NO. / NUMÉRO	ORIGINAL ORDER QUANTITY / Quantité d'ordre ORIGINAL	UNIT / UNITÉ	PREVIOUS SHIPPED QUANTITY / PRÉCÉDENT Quantité livrée	MFG. PART NUMBER / MFG. PARTIE NUMÉRO DAA-897121-1 D2600-1-160	ALLOY & TEMPER / ALLIAGE & TEMPER 6061 T6 160.0000 IN	FINISH DESCRIPTION / DESCRIPTION DE FINITION FABRICATION DESCRIPTION / DESCRIPTION DE FABRICATION SHIPPING TOLERANCE / EXPÉDITION TOLERANCE Cut(+): 0.1180 Cut(-): 0.0000 Min: 0 % Max: 0 %	NBR OF PKGS / NBR DE PKGS 2	GROSS LBS / LIVRES BRUT 1,190	NET QUANTITY / QUANTITÉ NETTE 1,155	UNIT / UNITÉ LB	QUANTITY DUE / Quantité en raison
003	1,201	LB						540	524	KG	
	90	PC							92	PC	
						808460 / 126835	1	595	578		46 PC
						808460 / 126836	1	595	578		46 PC

Transportation/Traffic damages and/or shortage claims are to be noted on the delivery copy of sellers shipping manifests and signed and dated below by customers authorized representatives.  
No return materials will be accepted for credit without permission. The articles and/or services covered by this shipping manifest were produced in accordance with the fair labor standards act of 1938 as amended. Order accepted subject to the terms and conditions stated on the reverse side.

CUSTOMER ACKNOWLEDGEMENT OF GOODS DELIVERED AND CONDITION

Page 3

DATE OF DELIVERY

DRIVER

8	4,147	4,004	LB
	1,881	1,816	KG
		344	PC
TOTALS			